23-S1-Q4

Q(a) 不考

(b) ① Describe the brightness constancy

Solution $I(x,y,t) = I(x+u, y+v, t+1)$

② periving the Brightness Constancy Constraint

$I(x+u, y+v, t+1) \approx I(x,y,t) + \frac{\partial I}{\partial x}u + \frac{\partial I}{\partial y}v + \frac{\partial I}{\partial t}\cdot 1$

Since $I(x,y,t) = I(x+u, y+v, t+1)$

So, we have $I_x u + I_y v + I_t = 0$

optical flow constraint equation

③ LK：不考

(c) 不考

(d) 不考